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Recommendations

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## Review of the Blue Ribbon Commission on America's Nuclear Future Draft Recommendations

### *Witnesses*

#### **Jack Spencer**

Research Fellow, Nuclear Energy Policy, Heritage Foundation

#### **Peter Swift**

Distinguished Member of the Technical Staff, Sandia National Laboratory

#### **Roger Kasperson**

Professor and Distinguished Scientist, Clark University

#### **Gary Hollis**

Chairman, Nye County Board of County Commissioners

#### **Rick McLeod**

Executive Director, Savannah River Site Reuse Organization

#### **Mark Peters**

Deputy Laboratory Director for Programs, Argonne National Laboratory

### *Subcommittee on Investigations and Oversight Members Present*

Paul Broun, Chairman (R-GA)

Paul Tonko, Ranking Member (D-NY)

Jerry McNerney (D-CA)

Dana Rohrabacher (R-CA)

### *Subcommittee on Energy and Environment Members Present*

Andy Harris, Chairman (R-MD)

Brad Miller, Ranking Member (D-NC)

Judy Biggert (R-IL)

On October 27, 2011 the House Committee on Science, Space, and Technology held a Joint Hearing with the Energy and Environment and the Investigations and Oversight Subcommittees. This hearing was held to review the draft recommendations made by the Blue Ribbon Commission on America's Nuclear Future (BRC) and to consider science and technology issues associated with spent nuclear fuel management. President Obama issued an Executive Order (EO) in January of 2010 that directed the Secretary of Energy to create a Blue Ribbon Commission to "conduct a comprehensive review of policies for managing the back of the nuclear fuel cycle, including all alternatives for the storage, processing, and disposal of civilian and defense used nuclear fuel and nuclear waste." Around the same time, the Department of Energy (DOE) withdrew its licensure application to make Yucca Mountain a nuclear waste repository site. The BRC was instructed not to comment on the suitability of Yucca Mountain as a repository site or the request to withdraw the application.

Investigations and Oversight Chairman Paul Broun (R-GA) said in his opening statement that while the draft recommendations offer a chance to explore innovative policy options, "the fact that the Commission was precluded from addressing Yucca Mountain limits the usefulness of the report." He expressed concern that the Savannah River Site in Georgia is becoming a "de facto" nuclear waste site under the BRC interim storage recommendations. Broun stated his distrust in the political manner in which the

federal government decided to pull Yucca Mountain as a repository, since a previous report on the suitability of the site concluded that it met all necessary safety requirements. Investigations and Oversight Ranking Member Paul Tonko (D-NY) told the panel in his opening statement that closing Yucca Mountain was not a science-based decision. He said there has been a “lack of scientific integrity” and too much “political muscle” involved with the topic of nuclear waste disposal. Tonko added that this is partially a state’s rights issue, and that if Yucca Mountain is opened as a repository it should be with the consent of the state of Nevada.

Energy and Environment Chairman Andy Harris (R-MD) noted that America gets twenty percent of its electricity from nuclear power from a total of 104 reactors that provide “clean, affordable” energy. Harris applauded the BRC members and their recommendations, specifically long-term support for research, development, and demonstration on advanced reactor and fuel cycle technologies that could reduce high-level radioactive waste quantities and improve waste management. He noted, however, that the effectiveness of the BRC contributions “appear to be limited by politics.” Energy and Environment Ranking Member Brad Miller (D-NC) said in his opening statement that this was an “odd hearing” because none of the witnesses in the panel were members of the BRC. He pointed out that, although he cannot envision America’s future without nuclear energy in its portfolio, nuclear energy is “far more expensive” than other forms of energy like natural gas. Miller said it was not clear why the committee could not wait to hold a hearing until January when the BRC’s final report comes out.

Jack Spencer of the Heritage Foundation told the committee in his testimony that there are three fundamental problems with current U.S. nuclear policy : a lack of any long-term geologic storage facilities even though the government has spent \$15 billion on the initiative, waste producers bear no responsibility for the waste management, and there is “no specific price for specific waste” management services. Spencer added that the BRC recommendations are not likely to achieve any progress because they do not address any of these fundamental problems. He believes that the BRC should suggest a limited role of the federal government in geologic repository operations and waste management, and a transfer of responsibility toward the private sector. He said that the BRC should ask the Nuclear Regulatory Commission (NRC) to complete the licensure application for Yucca Mountain so that the information can be viewed publicly and a well-informed decision can be made.

Peter Swift of the Sandia National Laboratory described his role as the lead scientist for Yucca Mountain repository research and said that estimates of mean annual nuclear radiation exposure that a person might receive living in the vicinity of the repository over the next million years are well below the Environmental Protection Agency (EPA) limits. He told the committee that he agrees with the BRC’s conclusion that “deep geological disposal is the most promising and accepted method currently available,” whether that disposal is done in mined repositories or in deep boreholes.

Roger Kasperson of Clark University said in his testimony that regaining social trust is the most important step when approaching nuclear policy. He said that there are “deep uncertainty problems,” mostly because this is a new endeavor and experience is limited. Kasperson suggested that the nuclear management process needs to be revolutionary, as it will need to change over time.

Gary Hollis of the Nye County Board of County Commissioners told the committee that Nye County has been “fully engaged” with the BRC as part of their oversight responsibility. He believes that the withdrawal of the Yucca Mountain licensure application was a violation of the law. Hollis said he is “disappointed” that the draft report from the BRC implies a lack of support in Nevada for Yucca Mountain. He argued that Yucca Mountain has support of surrounding communities, especially that of Nye County.

Rick McLeod of the Savannah River Site Reuse Organization explained in his testimony that his organization believes that the Administration’s “decision to halt work on Yucca Mountain is wrong headed” and works against America’s long term interests. He told the committee that he completely agrees with full transparency of information and a science-based approach. McLeod commented on a need for separate disposal regulations for high level defense waste and commercial spent fuel.

Mark Peters of the Argonne National Laboratory said in his testimony that he agrees with the BRC’s efforts to “move forward expeditiously.” He is in support of an advanced fuel cycle research and development (R&D) program. Peters said that America needs to increase its energy generating capacity to prepare for the next few decades.

During the question and answer period, Broun asked McLeod if Yucca Mountain was excluded in the BRC draft recommendations, and what factors were taken into consideration when evaluating it as a repository site. McLeod said that Yucca Mountain is excluded and “may be one of the missing recommendations in the report.” He added that the factors included possible

sea level changes, erosion of land surfaces, seismic effects, possible volcanism, groundwater flow of nuclides, and potential pathways for human exposure. Broun asked Hollis to explain why Nye County supports the use of Yucca Mountain but the state of Nevada is firmly against it. Hollis explained that Yucca Mountain is being portrayed outside the county as a “dump” and public opinion is therefore very negative.

Tonko asked about future nuclear waste sites and the approval processes. Kasperson replied that he has spent time in Sweden where they rely more on voluntary consent rather than coercion, which he said has been the primary mode of action in the U.S. He said that the U.S. needs to achieve a higher degree of voluntary consent with states in order to “grease the wheels.” Harris noted that the NRC has not released much of the scientific data from Yucca Mountain and asked the panel if it is important that this information be released. Spencer and Swift agreed that the release of this information is critical to allow for the best possible decisions to be made and to come to an agreement on a much-needed repository. Harris inquired about the advantages and disadvantages of deep borehole technology. Swift replied that the technology is essentially drilling a five kilometer hole in the crystalline bedrock, using the lower two kilometers for disposal, and sealing the column. He said that the borehole technology exists but more research should be done to confirm the reliability of the seal technology. He added that if America relied only on borehole waste technology, the country would need “just under” 1,000 boreholes for the waste from all 104 reactors.

Miller asked whether the transportation of nuclear waste to Yucca Mountain passed through Las Vegas. Hollis told Miller that the waste does not go through downtown Las Vegas, but some of it does go through Clark County. Judy Biggert (R-IL) asked Peters what he recommends for the next nuclear fuel cycle R&D program. Peters responded that good research is being done but the demonstration of that technology needs to get started. He added that if America grows its nuclear energy sector it needs to “close the fuel cycle” by focusing on recycling the waste. Jerry McNerney (D-CA) told the panel that he agreed with Kasperson’s emphasis on public trust, but argued that transferring power to the private sector would not engender public support. He asked Swift if there are other feasible options for disposal besides Yucca Mountain. Swift said although Yucca Mountain, in his opinion, was the best option due to its ideal location above the water table, there are other options for disposal. He mentioned that France, Germany, and Sweden are all looking into new depository options. Dana Rohrabacher (R-CA) told the panel that he does not understand why the federal government has not built a prototype for water-cooled reactors, which he called a more “promising” option than “digging holes.” Peters responded that there first needs to be a market for those reactors in order to build a prototype.

The hearing charter, full witness testimonies, and the majority opening statements can be found on the committee web site.

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